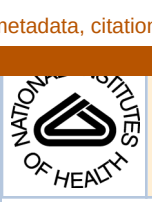

Published in final edited form as:
AIDS Behav. 2011 April ; 15(Suppl 1): S35–S50. doi:10.1007/s10461-011-9902-5.

Migration, Neighborhoods, and Networks: Approaches to Understanding How Urban Environmental Conditions Affect Syndemic Adverse Health Outcomes Among Gay, Bisexual and Other Men Who Have Sex with Men

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Abstract

Adopting socioecological, intersectionality, and lifecourse theoretical frameworks may enhance our understanding of the production of syndemic adverse health outcomes among gay, bisexual and other men who have sex with men (MSM). From this perspective, we present preliminary data from three related studies that suggest ways in which social contexts may influence the health of MSM. The first study, using cross-sectional data, looked at migration of MSM to the gay resort

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The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the National Institutes of Health or the Centers for Disease Control and Prevention.

Author Contributions: Authors of each study are listed as footnotes in each section.

area of South Florida, and found that amount of time lived in the area was associated with risk behaviors and HIV infection. The second study, using qualitative interviews, observed complex interactions between neighborhood-level social environments and individual-level racial and sexual identity among MSM in New York City. The third study, using egocentric network analysis with a sample of African American MSM in Baltimore, found that sexual partners were more likely to be found through face-to-face means than the Internet. They also observed that those who co-resided with a sex partner had larger networks of people to depend on for social and financial support, but had the same size sexual networks as those who did not live with a partner. Overall, these findings suggest the need for further investigation into the role of macro-level social forces on the emotional, behavioral, and physical health of urban MSM.

Keywords

Homosexuality; Male; Urban health; Social environment

Introduction

Gay, bisexual, and other men who have sex with men (MSM henceforth) experience significantly higher levels of HIV/AIDS, drug and alcohol use, anxiety and depression, and other mental and physical health problems, as compared with the general population of men [1–5]. Some have proposed that these outcomes are syndemic and causally associated with adverse childhood and adolescent developmental experiences—experiences reflective of societal oppression of gay men [6, 7]. Such experiences may be compounded among MSM of color,[1] who live within a system of oppression related to race/ethnicity that contributes to adverse health outcomes [1]. Thus the larger social and physical environments (conceptualized as systems of oppression and opportunity) are hypothesized to play a fundamental causal role in the adverse health outcomes that characterize the health profiles of many MSM [8].

We propose that three theoretical approaches—socioecological (also called social ecological), intersectionality, and lifecourse—may enhance our understanding of how syndemic adverse health outcomes among MSM are produced. A socioecological approach, borrowed from the field of child development [9, 10], as applied in public health, examines multiple levels of influence (i.e., macrosocietal forces, public policies, as well as influences at the neighborhood, institution, community, family, dyad, individual, biologic and genetic levels) on health behavior and health outcomes [11, 12]. Intersectionality, born in sociolegal analysis [13], is considered a research paradigm that addresses the interactive impact on individuals existing in multiple identity groups (e.g., sexual orientation and race), each of which is subject to systems of oppression [14–16]. Finally, the lifecourse approach is used in social epidemiology to understand the synergistic impact of multiple living conditions and experiences across the lifecourse, recognizing that exposures occurring as early as in utero and during early childhood can affect health outcomes much later in life [17, 18]. These approaches, each of which focuses on either explaining population health or examining the impact of social group-based systems of oppression, provide a framework for assessing the roles of the larger social and physical environments within which MSM are situated in their health and well-being.

The following paper presents preliminary data from three studies that were framed by socioecologic, intersectionality, and lifecourse theories. Each study uses a distinct analytic

[1]We define “men of color” here as men who self-identify or are identified by society as African American or Black, Latino, Asian or multi-ethnic/race.

lens—migration, neighborhood effects, and social networks—to help illuminate how social context may influence health behaviors and outcomes among MSM across time and space. The first study considers how migration to urban areas with large gay communities may influence health and sexual behaviors; the second study explores how MSM experience community and identity within different urban neighborhoods; and the third study looks at the social support that African American MSM in Baltimore receive through social and sexual networks, and whether residential distance between sexual partners is associated with support. These three analyses, derived from preliminary data from on-going research, offer unique perspectives on understanding the full range of factors associated with the health and well-being of MSM, as well as new avenues for structural and systems interventions.

Study 1: Migration-Related Health and Social Risks for MSM in South Florida[2]

Over the four decades since the advent of the modern gay civil rights movement, gay male subcultures in large cities have maintained—as an integral and celebrated element of "gay ghetto" life—an intimate connection between recreational drug use, all-night parties, and sexual freedom [19, 20]. Writing about 1970s New York, Levine [21] called these cultural elements the "four Ds: disco, drugs, dish [gossip] and dick." The circuit party (typically a large week-long dance event where drug use is prevalent) was the primary symbol of this theme throughout the 1990s [22, 23]. More recently, the Internet has become a primary contact point for organizing private home- and hotel-based sex parties and individual hookups that include bare-backing (intentionally unprotected anal sex) and "party and play" (sex combined with drug use) encounters [24, 25]. Consistent with the large body of research linking sexual HIV risk behaviors and substance use among gay, bisexual and other men who have sex with men (MSM) [26, 27], many urban centers continue to report stubbornly high rates of HIV and sexually transmitted infections (STI) [28].

MSM frequently migrate to urban areas in an attempt to avoid discrimination and alienation and to find support and acceptance from other MSM [29, 30]. South Florida (Miami/Ft. Lauderdale) is a well-known migration destination for MSM, with the second highest ratio of same-sex households among large urban centers in the nation [31]. Miami reports the highest AIDS and HIV incidence rates in the US [28] and, exacerbating this health crisis, almost half (45%) of HIV-positive MSM in a recent Miami study were unaware of their infection [32]. To better understand what might be driving high-risk behavior in this region, extensive qualitative research was conducted among high-risk substance-using MSM in South Florida. This research led the investigators to construct a new developmental model of the sources of the severe health and social problems among these most vulnerable men. This model provides the theoretical orientation for an ongoing randomized clinical trial of a novel small group risk reduction intervention (the ROOM study). Some of the life history case studies that informed the model have been published elsewhere [33]. In the following report, we first explain the main elements of the model and relate these elements to the available literature. The balance of the section then describes preliminary data from ongoing research that point to the potential significance of migration to a new city as a key event affecting the health outcomes of MSM.

Theoretical Model of Risk

The model of health risks among MSM who migrate to urban centers is shown in Fig. 1.

[2]Kurtz and Chen.

Although migration to an urban gay subculture is a response to needs for escaping oppression and finding safety and friendship, seeking social support through urban gay subcultural attachment may increase men's vulnerability to sexual risks and drug use [6, 8]. The model theorizes that this increased vulnerability is related to the losses of close family relationships, established social and sexual mores, and years of social capital built up within the home community that occur upon migration. The investigators' research confirmed that these losses greatly reduce these men's economic prospects, as well as their ability to integrate within the larger society and its breadth of social opportunities.

The model further theorizes that the urban subcultures to which men migrate are somewhat limited in their capacity to be supportive because MSM bring their inherited masculinity norms, internalized homophobia, and histories of victimization—all aspects of the syndemic affecting MSM health [7]—to this new, less-structured social realm. At the same time, the high visibility and easy availability of the sex-drugs scenes makes these settings the first points of social contact for many migrant MSM.

Certainly, many men are able to keep the "fast lane" aspects of the subculture at enough distance to lead highly productive and socially integrated lives [6, 34]. However, a large minority of men appear to be unable to find social stability either within or outside of the gay scene. Many life history interviewees said that participation in the sex-drug scenes resulted in behaviors that crossed their own sexual and psychological boundaries. A common theme of the deepening problems for these men is an habituation to being "high" on sex, drugs, or sex and drugs together [33]. The explosion of the Internet as a social and sexual connection point appears to increase risks for sexual sensation seeking and simultaneously reduce the social opportunities afforded by gay subcultures [35, 36]. Sexual sensation seeking has been shown in a number of studies to be associated with higher risks for STI and HIV as well as for mental health problems such as depression [37, 38].

Recent research suggests that the period immediately after migration to a new city is a time of heightened vulnerability for MSM. As they strive to make new social connections, these men often find that the fast lane scenes are among the most visible and accessible sources. Although the literature in this area is limited, Bianchi et al. [39] study of Latino immigrant MSM in New York found that—consistent with the model in Fig. 1—many of these MSM migrated to escape homophobic oppression and HIV stigma at home, found public sex venues to be among the most visible and available social outlets, and were especially vulnerable to unprotected sex in the first years after relocation.

Methods

To further examine how risk behaviors may be related to migration, we present here data from the baseline assessments of 325 men participating in the ongoing clinical trial mentioned earlier, the ROOM study. The study is a two-armed randomized clinical trial testing the efficacy of an empowerment theory-based small group intervention compared to an enhanced community standard of care. Multiple recruitment methods are used, including direct outreach, participant referral, and Internet and print media. Eligible men are between the ages of 18 and 55; report recent (past 90 days) unprotected anal sex with a non-monogamous partner(s); and report using drugs (excluding marijuana) on at least 3 days in the past 90 days or getting drunk three or more times in the past month. Research protocols were approved by the University of Delaware's Institutional Review Board.

To examine whether recency of migration to South Florida was related to health risks, the sample was divided into three subgroups: those who moved to South Florida in the past year (n = 37), those who migrated between 1 and 5 years prior to study entry (n = 56), and those who resided in South Florida for more than 5 years (n = 232). Measures of health risks were

compared across groups using unpaired two-sample two-tailed t tests. Comparisons based on three of these variables are reported here: (1) the proportion of people each participant regularly socializes with who use drugs, measured on a 5-item scale ranging from "0 = none to 4 = all"; (2) the number of unprotected anal sex encounters with non-primary partners in the past 90 days; and (3) HIV serostatus.

We also examined the proportion of migrant HIV-negative MSM who seroconverted within 5 years of moving to South Florida. Men who were born in South Florida and those who moved to South Florida as children (under the age of 18) were excluded from this analysis. Finally, because some health risk measures, such as HIV-positive serostatus, might be expected to be associated with older age, we constructed one-way ANOVA models comparing the newest migrants (within the past year) to the other two groups on each of the risk measures controlling for age.

Results

Demographic and health and social risk characteristics are shown in Table 1. The participants are generally characterized by high education but low income, and high levels of substance dependence, mental health problems, HIV infection and ongoing sex risk.

The results comparing the three subgroups on health and health risk measures are shown in Figs. 2, 3 and 4.

Each measure of health and health risk appeared to deteriorate after living in South Florida for more than one year. The two subgroups of men who had been living in South Florida longer than one year reported socializing with more people who use drugs compared to the subgroup of men who had lived there less than one year ($t = 2.82$, $P = .005$). The mean number of unprotected anal sex encounters in the past 90 days was 13 for the past year migrants, 33 for those who moved to South Florida between 1 and 5 years ago, and 21 for men resident for more than 5 years ($t = 2.69$, $P = .009$ for the difference between past year migrants and those who moved 1–5 years ago; $t = 2.13$, $P = .03$ for the difference between those who moved to South Florida 1–5 years ago and men resident for more than 5 years). HIV prevalence rates were 27% for past year migrants and 50 and 48% for the longer-resident groups, respectively ($t = 2.43$, $P = .02$ for the difference between past year migrants and the combined two groups of longer residence). In multivariate models controlling for age, age was non-significant and *p* values substantially unchanged for each of the three health risk measures (data not shown).

In the examination of HIV seroconversion, 39 men who reported being HIV-negative adults at the time they moved to South Florida said they were diagnosed with HIV infection within 5 years of migration. As a proportion of all men who said they were HIV-negative adults when they moved to South Florida ($N = 125$), 31.2% seroconverted within 5 years.

Discussion

The main limitation of these preliminary findings is that they are not based on longitudinal data, and therefore it is not possible to determine a causal association between migration and changes in health and social risks. Moreover, the sample includes only substance-using men at high risk for transmission and infection of HIV; therefore, the findings cannot be generalized to the larger South Florida MSM population. Finally, South Florida's multi-ethnic, transient, and entertainment-focused gay subculture is unique to its space and time. In this regard, however, it must be recognized that sex-drugs scenes are evident in every urban gay subculture in the US [8, 40].

Nevertheless, the behavioral patterns that emerge from the baseline assessment data tend to confirm the theoretical model presented above. Recent migrants report lower levels of HIV infection, unprotected sex, and socializing with drug users than men who have resided in South Florida for longer periods of time, and the cross-sectional data suggest that these health and social risks may rise rapidly after migration. Three other findings support the idea that MSM who move to a new urban center are at heightened vulnerability in the immediate post-migration period: (1) men who lived in South Florida for 1–5 years reported significantly greater numbers of unprotected sex acts than either the newest (past year) migrants or those who lived in South Florida for more than 5 years; (2) almost one-third of HIV-negative adult men seroconverted within 5 years of moving to South Florida; and, (3) HIV prevalence rates are essentially the same for both groups of men who resided in South Florida for more than 1 year. These results all point to the likelihood that men who migrate to South Florida embrace the uninhibited fast lane subculture quickly upon arriving; but that they weary of it after several years, eventually reducing their health risks but only after a substantial number of them become HIV infected. Longitudinal research—and research in other cities—is needed to further support the connection between migration and health and social risks among MSM.

Because the social ties and living patterns that men initially establish in their new community tend to be self-sustaining, the immediate post-migration period may represent a key intervention opportunity to help MSM establish healthy and productive affiliations. Interventions to reduce drug use and sexual risks may be more successful to the extent that they address men's needs for—and skills at attaining—social relationships with men who do not participate in sex-drug scenes, as well as stronger ties to the broader community. Culturally appropriate and accessible health services are also urgently needed for men who have already developed harmful substance use and sexual behavior patterns.

Study 2: MSM in New York City Neighborhoods: Navigating Identity, Navigating Place[3]

There is a growing body of empirical social epidemiological research investigating the role of neighborhood characteristics (e.g., residential stability, social and physical disorder, socioeconomic level, collective efficacy) with respect to substance use, mental health, sexual behavior, and sexual health outcomes. These socioecological studies, typically approached from social disorganization and physical disorder theoretical perspectives, have found strong evidence of the positive and negative effects of neighborhood characteristics on violent crime [41], mental health [42, 43], sexually transmitted disease [44], and drug use [45]. More recent research suggests that these effects are mediated by socially interactive processes, including collective efficacy [46, 47] and community social norms [48], suggesting a role for social networks and migration patterns. Overall, these studies indicate that neighborhood characteristics among the general population are consequential to health outcomes above and beyond individual-level characteristics.

Whether and how neighborhood environments affect health outcomes and behaviors among gay, bisexual and other men who have sex with men (MSM) is almost completely unknown. However, the high prevalence of health problems found among urban MSM suggests that neighborhood characteristics may play a role. As described in the study above, many MSM migrate to urban "gay" neighborhoods that offer greater acceptance and social opportunities, but that also bring intensive exposure to high-risk micro-environments that significantly increase the likelihood of developing inter-related mental and physical health problems [33].

[3]Frye, Egan and Koblin.

Not all urban MSM migrate to gay-identified neighborhoods, however; therefore, it is important to study the potential influence of different types of neighborhoods on MSM health. For example, some MSM who move into urban neighborhoods (that are not gay-identified) are perceived as being part of a gentrifying wave that is not particularly welcomed by, nor tightly connected to, the existing neighborhood residents. These men may experience stress from this neighborhood tension, and/or they may be relatively inured to the micro-environments of their residential neighborhoods. Additionally, many MSM—particularly men of color—have lived in major urban areas all of their life. Some continue to live in their natal neighborhoods, and others migrate to more gay-identified neighborhoods within the same city [8].

For MSM of color born and raised in urban areas, there are context-specific social forces at play, particularly sociohistorical trends in specific cities. For example, in NYC the youth of men of color may have been characterized by the systematic disinvestment by New York state in primary public education in NYC over the past three decades [49], the mass incarceration of Black men via "quality of life" policing and differential drug-crime sentencing policies [50], the inter-linked crack and gun homicide epidemics of the early 1990s [51–53], as well as the recent sub-prime lending practices targeting communities of color that have further reduced family wealth and kin network-based economic resources [54]. Thus in addition to whatever individual-level effects these forces might have had, they have seriously distressed these men's natal residential neighborhoods, consequently disrupting the social networks in these areas. That these forces are linked popularly, theoretically, and empirically to structural racism and violence at the macro-level may have both made it difficult for some of these urban MSM of color to migrate out of their birth neighborhoods, and adversely affected their desire to migrate into gay neighborhoods that may offer some benefits (and perhaps different risks). From this perspective, we examined the experience of place among MSM living in a range of neighborhoods in NYC, exploring how these men feel and think about the neighborhoods in which they live, socialize and have sex.

Methods

We have previously outlined a conceptual model and supporting social and psychological theory that suggests various hypothetical mechanisms of influence between the social and physical neighborhood environment and a range of health outcomes among MSM [8]. Currently, we are conducting a 4-year cross-sectional study in NYC testing these hypotheses. The metropolitan statistical area that includes NYC (New York, New Jersey and Long Island) has the 10th highest percentage of coupled households that are gay or lesbian [31] and NYC has several established and emerging gay neighborhoods and enclaves. As part of this larger study, we conducted a formative study using exploratory qualitative methods to confirm that our overall approach and instrumentation for the main quantitative phase accurately reflect the lived experiences of the focal population. The qualitative phase of the study consisted of 20 in-depth semi-structured interviews with MSM exploring their thoughts, perceptions, and experiences of the neighborhoods where they live, socialize, and have sex. We interviewed 20 men recruited from four distinct neighborhoods (5 men per neighborhood) in NYC, including: Chelsea/Hell's Kitchen, a neighborhood with an established gay enclave that is largely white, has a significant and visible lesbian, gay, bi-sexual, transgender (LGBT) population, and has a median household income of $49,000; Fort Greene and the surrounding neighborhoods, an area of Brooklyn that is majority Black, with some visible LGBT presence, and thought to be an "emerging" gay enclave, and with a median household income of $28,070; Harlem, an historically Black neighborhood located in upper Manhattan, with a minimal LGBT presence and a median household income of

$21,508; and finally, Washington Heights, a largely Latino/a neighborhood, also in upper Manhattan, with little visible LGBT presence, and a median household of $28,497 [55].

Study participants were recruited by trained study staff using both passive (posters and flyers) and active (street outreach) methods. Participants were eligible if they: (1) self-reported biological male sex at birth; (2) reported engaging in insertive or receptive anal sex with a man in the past 6 months; (3) self-reported being at least 18 years of age; (4) lived in either Chelsea or Hell's Kitchen, Harlem, Washington Heights or Ft. Greene, Brooklyn for at least 12 months; (5) communicate in English; and (6) were willing and able to give informed consent for the study. Semi- structured face-to-face interviews were conducted in a private room at the study site; participants received $50 and a round trip MetroCard as reimbursement for their travel and in recognition of the efforts made to attend the interview.

The study protocol was reviewed by Institutional Review Boards of the institutions involved, and informed consent was collected from each participant. During the in-depth interviews, we asked participants to define and delineate (on a map) their "home" (residential) neighborhood, social neighborhood, as well as sexual neighborhood. The interviews then explored their perceptions about where they lived, socialized and had sex, as well as the relationship between neighborhoods, identity, behavior, and health. Interviews lasted approximately 1 h, were audio recorded, and professionally transcribed. Preliminary analyses were ongoing during data collection and confirmed existing foci for the main study phase as well as identified novel areas of inquiry. One Investigator (Egan) conducted all the interviews and two reviewed audio recordings and transcripts (Egan and Frye). Through discussion and reflection, salient themes and impressions emerged and were summarized with supporting quotations drawn from the transcripts.

Results

The mean age of participants was 34 (range 20–50). The men self-identified as either Latino (30%), African American (30%), multiracial (20%), white (15%), or Asian American (5%). Ninety percent identified as gay and ten percent as bisexual. All had been living in NYC for over 1 year. Seven were HIV-positive. Five men were interviewed from each of the four focal neighborhoods. In general, we found that the concept of "neighborhood" resonated with participants, with men offering rich accounts both of various stages of life spent in different neighborhoods, and the impact of certain neighborhoods on the process of coming out or discovering their sexual orientation and identity.

Migration to and Movement Around "the City"—Almost equal numbers of men in our sample were born within and outside NYC; eight men were born in NYC, two on Long Island, NY, and one each in Honduras, Mexico, and Puerto Rico; the remaining seven men were born in states other than New York. We explored reasons for migration within and to NYC and found consistency in narratives among men who were born in NYC, but outside of Manhattan, with men who moved from non-urban areas to NYC. Both groups described the desire to live in a place with less discrimination and more social and partnering opportunities [8]. For many men born outside of Manhattan, whether Brooklyn or Florida, the gay neighborhoods of Manhattan were described by most as a space that allowed them to "be themselves" compared to their places of origin. Several men described how desperate they were to get out of their neighborhoods in Brooklyn or Staten Island, and how they felt trapped in places that were geographically proximal to the gay enclaves of Manhattan, but socially distant.

Many of the men who grew up in NYC, but outside of Manhattan, described highly closeted childhoods and adolescence characterized by profound anti-gay sentiment and homophobia in their communities. A 25-year old man who grew up in Brooklyn said "*The family that I*

grew up here in the city never really embraced me simply because they felt like – you know – he's the homo in the family." Said another Brooklyn-born African American man, now 42 and living in Harlem, "*It wasn't real popular to be young, Black and gay in the projects*." He continued to describe how coming of age as a gay man in the Brooklyn projects led him to engage in unhealthy behaviors. He became addicted to drugs, and his sex life consisted solely of anonymous park-based cruising. He related, "*I often said that I had to be removed from New York in order for some things to change*." He did migrate to another place for several years where he received successful addiction treatment, and then eventually moved back to NYC (Harlem). Of moving to Harlem, he said: "*It was almost like a rebirth. Like I was home*."

Some men described traumatic separations from their families and natal neighborhoods, with the dissolution of social and kin networks beginning when they came out/ were discovered to be gay, and then worsening once they migrated. Upon migration, some of the men replaced or augmented these networks with gay community-based networks, although several men managed to maintain networks in various neighborhoods.

Selecting a Home Neighborhood—For the men we interviewed, the importance of, and community engagement with their home (residential) neighborhood varied greatly. For several men, economics were a primary motivator to choosing their home neighborhood; they simply lived where they could afford an apartment. For others, a home neighborhood was carefully selected and consciously integrated into their identity and behaviors. Residing within a traditional gay enclave was perceived as having both positive and negative consequences for the men who lived there. The men who lived there commented on the convenience, safety and pleasantness of the place, in contrast to other areas. The availability of sex and drugs was seen by a few as a drawback as it made risky activities more available and therefore tempting; one man compared the temptations of living there for young gay men to the experience of children when they enter "FAO Schwarz," the famed toy store in Manhattan. Another man described a feeling of community after having lived there long enough to become friends with his neighbors and joining a volleyball league. One 42-year old Latino man who lived in a gay area reported feeling pressure to conform to norms of appearance and conduct, saying, "*I mean, you feel like you have to do push-ups just to go the supermarket*."

Despite some of the perceived negative aspects of gay neighborhoods, it is important to note that some of the men who lived outside these neighborhoods only did so because of affordability. Some men who did not live in gay neighborhoods reported a strong identity-based connection to historically gay neighborhoods and to gay life more generally. One 42 years old African American man living in Fort Greene said "*Where do I fit in New York? I would have to say the Village. Because people like me are there… In other words it doesn't matter if you're transgender or whatever, these people identify with the same thing I do, we're all like the same sex*." As one 50-year old Latino man living in Washington Heights explained: "*As far as neighborhoods, it's still very important for me to note that there is a place I can go to, to sort of like veer on my own. Like, like obviously from, in New York, it's Chelsea and the Village and the lower east side. And anywhere where there's a gay bar or a gay bookstore or gay regular bookstore, you know, that's - that's, I mean, that's very important for me because I get sick of like Monday through Friday dealing with like straight people, you know? … And so yeah, I need to have sort of like that, like that place to sort of like hang and be around my own kind. So that's very important*." This man gave voice to the profound feeling of oppression that many (though not all) gay men feel as they navigate mainstream, heterosexist society.

In contrast, for some men not living in gay areas, their home neighborhoods served as a refuge from the pressures associated with the gay community, such as conforming to a specific look or maintaining the drug-use and sexual lives that often occurred in the gay areas. Some men, in fact, consciously chose to continue living in their natal neighborhood, rather than move to a gay neighborhood. These men described complex narratives of expressing their identity and fighting for acceptance over time. As one man explained: "*I plan to stay there even though it's not the greatest place you want to live, but I stay. And I know people there. I grew up there, so the people that live on my block, they know me, I know them." [Interviewer: "Is that a good thing?"] (pause – thinking) "Yeah. Why? 'Cause they already know my lifestyle. They know who I am. They don't bother me. They don't look at me. They don't tease me. They don't pick on me. They don't threaten me. None of that, so I feel safe*." A 32 years old Latino man, when asked why he remained in his natal neighborhood, explained that "home" meant connection to his original community, not the gay community: "*Well, because I'm not looking to live somewhere where I can be openly gay. I want to live somewhere where I could have a peace of mind and just be - be - be at home - you know, I don't know, it's just - to me, gay has nothing to do with that, I don't know*."

The Intersection of Race, Place, and Social Identity—In our interviews, we paid particular attention to whether and how neighborhoods affected the men's feelings of connectedness to both the gay and their racial/ethnic communities, as well as how place affects feelings of social and personal identity. Men of color were aware of the racial and ethnic composition of their home neighborhoods and described how they fit into these areas and what barriers existed to community affiliation. One African American man living in Washington Heights reported that he rarely saw other Black people in his neighborhood who were not Latino/a, He explained: "*I'm a gay black man…before I 'm gay, I'm still a black man. So, every now and then it wouldn't hurt to see someone that, like, I'm able to recognize in the neighborhood and say, 'Hey, you,' even if he says, 'Fuck you, faggot.'… Like, someone I could identify because after a while if you do not, eventually you start to lose your ethnicity. Like, you don't want to lose your blackness*." A 27-year old Latino man living in Washington Heights enjoyed his predominantly Latino/a neighborhood, and felt comfortable there as an out gay man, but did not feel part of the community, in part because he did not speak Spanish.

Some of these men also described a strong connection with their neighborhoods of origin that was at times explicitly described in terms of race/ethnicity; they noted a tension between living where they felt "at home" versus where they could be "openly gay." Several men, both those who lived in Chelsea and those who did not, talked about the "Chelsea Boy" stereotype, a young, white, looks-conscious, well-muscled, middle class, gay man. Some men of color felt that being non-white automatically excluded them from this neighborhood-based social identity. One 32-year old Latino man born in NYC said about living in Chelsea: "*I'm Latin and so, you know, a Chelsea guy to me is a Caucasian guy… It's my neighborhood, but I don't feel a sense of community*." He described his natal neighborhood of Williamsburg, Brooklyn as more like a community, "*because there are still people that I know, people that still live there – you know, people that I grew up with that are still there*." And yet he was not "openly gay" in his natal neighborhood in Brooklyn.

Navigating Neighborhoods: Networks and Behavior—Some men described navigating neighborhoods spread throughout NYC in order to maintain connections to their various networks, including family networks in their natal/ home neighborhood, gay social networks, and sexual networks. These networks were almost always within different neighborhoods and held distinct social and behavioral norms and supports. One participant described how traveling between his natal neighborhood in Brooklyn and his current home

neighborhood, Chelsea, changes how he behaves: "*When you're with your gay friends, you're a bit more– you have your guard down. You're ki ki'ing… you're just cracking jokes and feeding off of each other; when I'm in the neighborhood I grew up in [Brooklyn] I'm a little more serious and more, you know, a little more reserved*." He added, "*If I were with my gay friends, it would be in another part of the neighborhood, maybe not where I grew up*".

This idea of modifying gay-associated behavior (holding hands, clothing choices, "botching it up") based on neighborhood was a common theme across all interviews. While some men believed that they were, "always themselves" no matter where they were, most described at least some level of having to be aware of what neighborhood they were in. One man described it as having to, "*Tak[e] a look at your surroundings and what feels safe and what doesn't feel safe… [My partner will] hold my hand down here [Village]. If he get uptown [Harlem], he won't hold my hand*". Some believed that too overt displays of being gay (e.g., holding hands) in certain neighborhoods was "disrespectful" to the community living there. One man said of expressing gay-identified behavior, "*Because it just don't seem right in that area [Flatbush, Brooklyn]. It's just not appropriate*." For most, however, considering what they did (gay-associated behavior) based on where they were (NYC neighborhood) was motivated primarily by the desire to protect themselves in environments perceived as potentially dangerous to gay men. As one man said, "*I have one goal; to get home safely. Have my keys in my hand and I get home and safe and that's it*."

Discussion

The findings presented here are limited in that they are based on qualitative data from a convenience sample meant to confirm foci for the quantitative portion of a study. This preliminary analysis does begin, however, to illustrate the complex interaction between neighborhood factors (e.g., culture, racial/ethnic composition, social norms) and individual factors (e.g., socioeconomic status, gay identification, feelings of community affiliation, and racial/ethnic identity). There was a good deal of variation in how individuals experience neighborhood, and how neighborhoods shape their lives. Overall, though, we found that neighborhood affects gay men in unique ways; in particular, we found that the degree of homophobia in the social environment influences how some men behave both sexually and socially. In addition, nearly all the men interviewed described concerns around safety in both their home and social neighborhoods. The recent anti-gay sexual assaults of three Bronx [56] men represents the far end of what is a continuum of constant (and often unreported and/ or unacknowledged) threat of emotional, physical, and sexual assault that gay, bisexual and other MSM have to endure *in their own neighborhoods*.

We also observed important intersections between gay identity and racial or ethnic identity, and found that the experience and expression of different identities was often based on place. This phenomenon was seen in the context of these men's lifetime experiences of tension between sexual expression/behavior/identity and their heterosexist family and childhood neighborhood environments. Further analysis of these data will allow us to explore in greater detail these intersecting environmental and individual elements and better hypothesize what their impact might be on health behaviors and outcomes among MSM. For example, it could be theorized that the constant tension experienced between identity and place may expose MSM to unhealthy levels of stress, leading to multiple negative mental and physical health outcomes; at the same time, it is possible that exposure to positive neighborhood characteristics could engender resilience in the face of negative environmental and other health exposures. A more comprehensive understanding of the relations among behaviors and neighborhoods will provide important insights for the development of geographically specific and norms-based health outreach and programming.

Study 3: Social Networks and Social Geography of Partner Relationships Among African American MSM in Baltimore, Maryland[4]

African American men who have sex with men (MSM) in the US have exceedingly high rates of HIV [28]. Few studies have examined the social networks of MSM [57, 58], and there is even less information on the social networks of African American MSM [59]. Examining African American MSM social networks, the venues where African American MSM meet sexual partners, and the relationship between social network, partner meeting venues, and geographic distance between men and their sex partners may enhance our understanding of how African American MSM construct their social support and relationship environments. These relationships are likely to be important for HIV prevention, care, medication adherence, and general psychological and physical well-being. Social network characteristics, such as density, size, drug use, and homophily, have been linked to HIV and STI transmission [60– 62], and may help to explain the greater burden of HIV/ AIDS among African Americans compared to other racial groups in the US [63]. Egocentric or personal network analysis is also a useful method to assess the amount, type, and source of emotional and instrumental social support [64]. Network analysis does not assume that social support is derived from specific role relationships, such as kin, sex partner, or friends. Rather, information on sources of support is obtained by generating a list of network members who provide support and then assessing the relationship of these supporters.

Few social network studies of sexual partners have included a geographic component, though studies of partnering among urban African American heterosexuals suggest that most sexual partners live in geographic proximity [65]. Thiede et al. [66] have examined the relationship between geographic location of partners' meeting venues, such as bathhouses or sex clubs, and recent HIV infection. In the study described below, we examined the relationship between forums for meeting current partners and the residential distance of these partners. We also examined the relationship between egocentric risk and social support networks and residential distance among sexual partners.

Methods

The Unity in Diversity (UND) study was a culturally tailored pilot randomized clinical trial of a behavioral intervention using peer education and social networks to promote behavior change among at risk African American MSM in Baltimore, MD. The results presented here were derived from preliminary analyses of the baseline social network, demographic, and partner venue data from the Index participants (initial recruits) of the UND study.

Sample—Index participants were recruited by street and venue-based outreach by trained field recruiters, word-of-mouth, advertisements in the local papers, and by active Internet-based recruitment on websites and chatrooms for African American MSM. Index inclusion criteria were: (1) 18 years old or older, (2) identify as a male, (3) self-report black or African American race/ethnicity, (4) report having ≥2 sex partners in the prior 3 months (one of which must be male), (5) report unprotected anal sex with a male in prior 3 months, (6) willingness to take HIV test if negative or unknown status or provide documentation of HIV-positive status, and (7) willingness to identify social network members and recruit them into the study. Potential Index participants were screened in a community-based research clinic setting using audio computer-assisted self interview (ACASI) methods. Eligible Index participants, who provided written informed consent, were enrolled into the study and completed a baseline survey using ACASI. A social network inventory was administered

[4]Latkin, Tobin and Yang.

face-to-face by a trained interviewer. All protocols were approved by the Institutional Review Board at the Johns Hopkins Bloomberg School of Public Health and CDC.

Measures—*Social network characteristics* were assessed with a modified version of the support and drug network inventory [67]. The inventory contained 14 name generator questions. Participants were asked to list individuals from whom they receive emotional and material support, health-related advice, and with whom they have used drugs (drug network) or had sex in the past 3 months (sex network). The total size of the network was the sum of the number of people listed. Density of a network, a measure of inter-connectedness of network members, was assessed by asking participants which network members knew the other networks. Density scores range from 0 indicating that no network members knew others to 1.00 indicating that all network members knew each other. Once the network was elicited, participants were asked about a variety of characteristics of the listed network members, such as their age, gender, and employment status. Participants were asked to indicate where they had met their sexual partners (through friends, on the Internet, at a bar, in a support/social group, at a party, on a chat line), and the geographic distance between their own and their partners' residence(s) (in the same neighborhood, in the same household). On a scale of 1–5, where 1 was 'Not dependent' and 5 was 'Very dependent," dependence on partners was assessed by the question "how much do you depend on [PARTNER] for things like money or a place to live or stay?".

Demographic characteristics included age, education, and employment status. In addition, participants who self-reported negative or unknown HIV serostatus provided an oral specimen to be tested using Oraquick rapid HIV antibody testing kits. Preliminary positive results were confirmed using Western Blot assay. Participants who self-reported HIV-positive serostatus were asked to provide written documentation such as medications or clinical test results for validation or provide an oral specimen for HIV antibody testing. HIV-positive was defined if participants were tested positive by confirmatory tests or provided HIV-positive testing result document.

Data Analysis—The analyses for this study were restricted to the Index participants (N = 188), all of whom were self-identified African American men who have sex with men. Frequency distributions were calculated to examine the distribution of the variables and to generate a profile of sample characteristics. Chi-square statistics and ANOVA were used to examine the association between the number of partners met in various venues and residential distance from sexual partners, and the relationship between egocentric network social support and risk factors and residential distance among sexual partners.

Results

The men in this sample were sociodemographically disadvantaged, with more than half living below the poverty line and over 75% having been incarcerated in their lifetime (Table 2). Average age was 38.2 (SD = 10.89), and 49.5% were HIV infected. The largest percentage of participants reported that they met sex partners through friends (n = 68, 36.2%), followed by bars (n = 57, 30.3%) and the Internet (n = 41, 21.8%).

Over half of participants (58.5%) reported that all of their sex partners live outside the neighborhood. About one-fifth of participants (20.7%) had partners living in the same neighborhood but not in the same household, and a similar proportion of participants had partners living in the same household. There were no statistically significant associations between number of partners met through various settings and residential distance from sexual partners.

Table 2 shows the sizes of the participants' social and sexual networks, and Table 3 compares these networks between participants who reported living with a sex partner and those who did not.

The average total social network size was 8.72 (SD = 4.34) and the average number of sexual partners was 3.28 (SD = 1.79). There were no statistically significant differences in the size of social networks or in the number of male or female sexual partners between participants with partners living in the same household and those without partners living in the same household. There were also few differences in the size of several subnetworks, although participants with household partners reported having significantly more network members who "pitch in to help" and who they entrust with money. Participants residing with a partner reported significantly more financial support from their sex partners. They also reported more social support, including having a larger number of male partners to hang out with and see frequently. Participants who resided with a partner also reported higher network density, older network members, and a higher proportion of HIV positives in their networks. Moreover, they themselves were also more likely to be HIV-positive.

Discussion

In this sample of African American MSM in Baltimore, the largest number of partners was met through friends, indicating that social networks are key factors in partner selection for these men. The second most common method of meeting partners was at bars. Although these venues depend less on network factors for meeting new partners, network members may influence the type and specific bar that participants frequent. The third most common method of meeting partners was the Internet, which is likely to be minimally influenced by peer network members, though these relationships may become important social network members. It should be noted that the number of participants reporting meeting partners through electronic media may have been inflated by recruiting participants through chat rooms. These findings suggest that African American MSM over 30 in Baltimore connect to MSM partners through face-to-face contact rather than mostly electronic media, pointing to the continued need for social network and venue-based interventions for these men.

About half of the participants only had sex partners living outside their neighborhood. The other half was split between those who had partners living in the same household and those with partners in their neighborhood but not household. We found no evidence of an association between where participants met their partners and the geographic distance between partners' residences. However, the finding that half the men only had sex partners outside their neighborhood may indicate that these men cannot find partners within their own home neighborhoods, likely because they live in neighborhoods without much of a gay presence (and possibly with anti-gay norms). This implication is consistent with the observations given in Study 2 above.

Number of sex partners did not differ between those who lived with a sex partner and those who did not, suggesting that sex outside primary relationships may be common among this sample, and should be considered when designing interventions. Respondents whose partners lived in the same household tended to report receiving more social and financial support as measured by size of social support networks. These findings suggest that living with a partner is an important factor in receiving financial and social support. Those who lived with a partner were also more likely to be HIV-positive than those who did not live with a partner. Therefore, we do not know if the additional social support is related to HIV status or co-habitation, though it is likely that living with a partner provides the opportunity for greater social support interactions. Future research should examine how residential location of partners, including co-habitation, may be linked to important mental and physical health outcomes, including HIV care and support and HIV medication adherence.

Conclusion

In this paper we have presented three preliminary analyses that use three distinct analytic lenses for understanding how certain urban social and cultural contexts may confer risk for —and protection against—adverse health outcomes among MSM. Although these results are preliminary and/ or exploratory, they offer novel insights into the lives of urban-dwelling MSM, particularly MSM of color.

Several interesting considerations emerge from this work. First, it is evident that city-specific characteristics may increase risk for MSM; this argues for continuing to focus on highly contextualized analyses of the lives of MSM. This also raises some concerns for generalizability of findings from one urban locale to others, as the factors that create risk environments and/or provide social buffers against risk may differ significantly from city to city (or even among neighborhoods within the same city). Second, migration to gay urban areas emerges as a critical experience across two of the studies presented. Thus, periods of the migration experience, from first arrival to community integration, are important to consider both as they relate to increased exposure to social, sexual, and drug risk factors, and as they provide key opportunities for engaging men in health promotion programs. Third, these results suggest that while many urban MSM are highly mobile, they value their neighborhoods and the social networks embedded there, offering opportunities for neighborhood-based and social network interventions. Finally, the role of networks of support and risk that are geographically based is an understudied area, but one of potentially particular importance for MSM of color, who face unique challenges MSM in urban settings.

Together, these approaches situate MSM within the larger social and physical environment, broadening the lens beyond individual level factors to examine how social conditions and processes affect gay men's life experiences and health behaviors. By exploring how migration, neighborhoods, and networks act as backdrops, mechanisms, and spaces where both health damaging and health promoting behaviors play out, we can identify new avenues for further research. The results presented here are preliminary and thus limited. Nonetheless, these findings offer a glimpse into the possibilities of future study that, if pursued, may offer potential points for structural and or individual/group interventions for the promotion of sexual health among urban MSM.

Acknowledgments

The following individuals contributed to the design and/or conduct of the parent studies described here, including: STUDY #1: James Inciardi, Ron Stall, Hilary L. Surratt, Gustavo Aguilera, Douglas Maesk, Matthew Bradley, Mance Buttram, John Crane, Luis DeJesus, Manh Nguyen, and Christopher Stults (Miami). This study was support by Grant Number R01DA024579 from the National Institute on Drug Abuse. STUDY #2: John Beard, Magdalena Cerda, Sandro Galea, Mary H. Latka, Hong Van Tieu and David Vlahov (New York City). This study was supported by grant number R01 HD059729 from the National Institute of Child Health and Human Development. STUDY #3: Melissa Davey-Rothwell, Joanne Jenkins, Errol Fields, Tia Zeno, Danielle German (Baltimore). The LAAMP Study Team also wishes to acknowledge all of the study participants who volunteered for this project and the study staff and facilitators for their commitment to the success of this project. We would like to acknowledge and thank the CDC Study Team: Pilgrim Spikes, Jocelyn Patterson, Stephen A. Flores, Heather Joseph, David Purcell, Greg Millett, Cathy Zhang, and Helen Ding. This study was supported by a cooperative agreement between Johns Hopkins University and the Centers for Disease Control and Prevention (1 UR6 PS000355-01). Finally, we would like to thank Hilary Goldhammer for her assistance in the editing and preparation of this manuscript.

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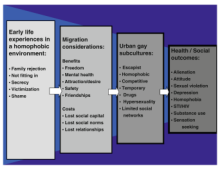


Fig. 1.
Theoretical model of health risks for MSM who migrate to large urban centers

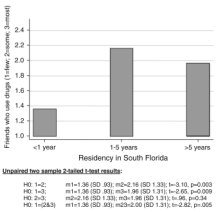
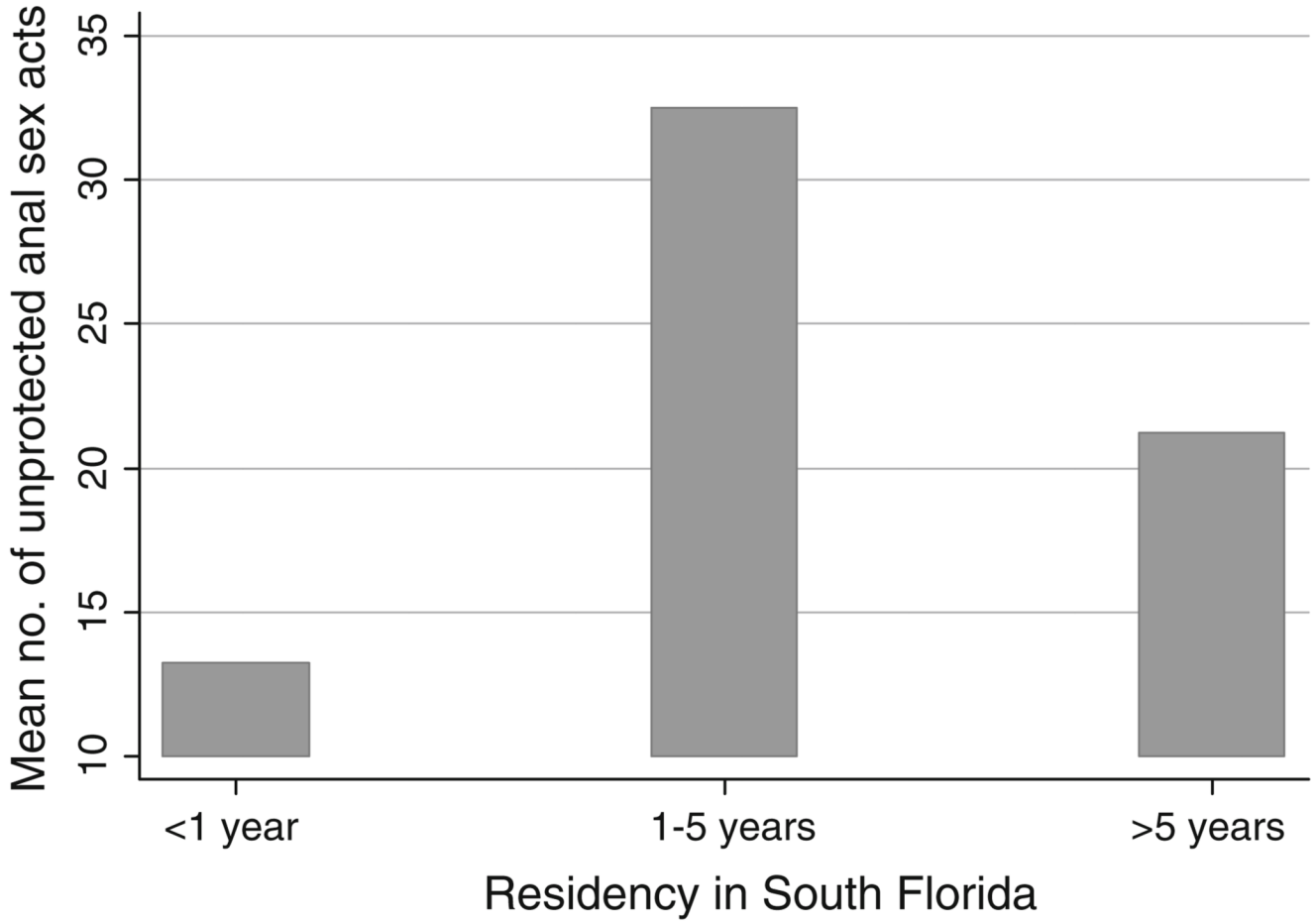


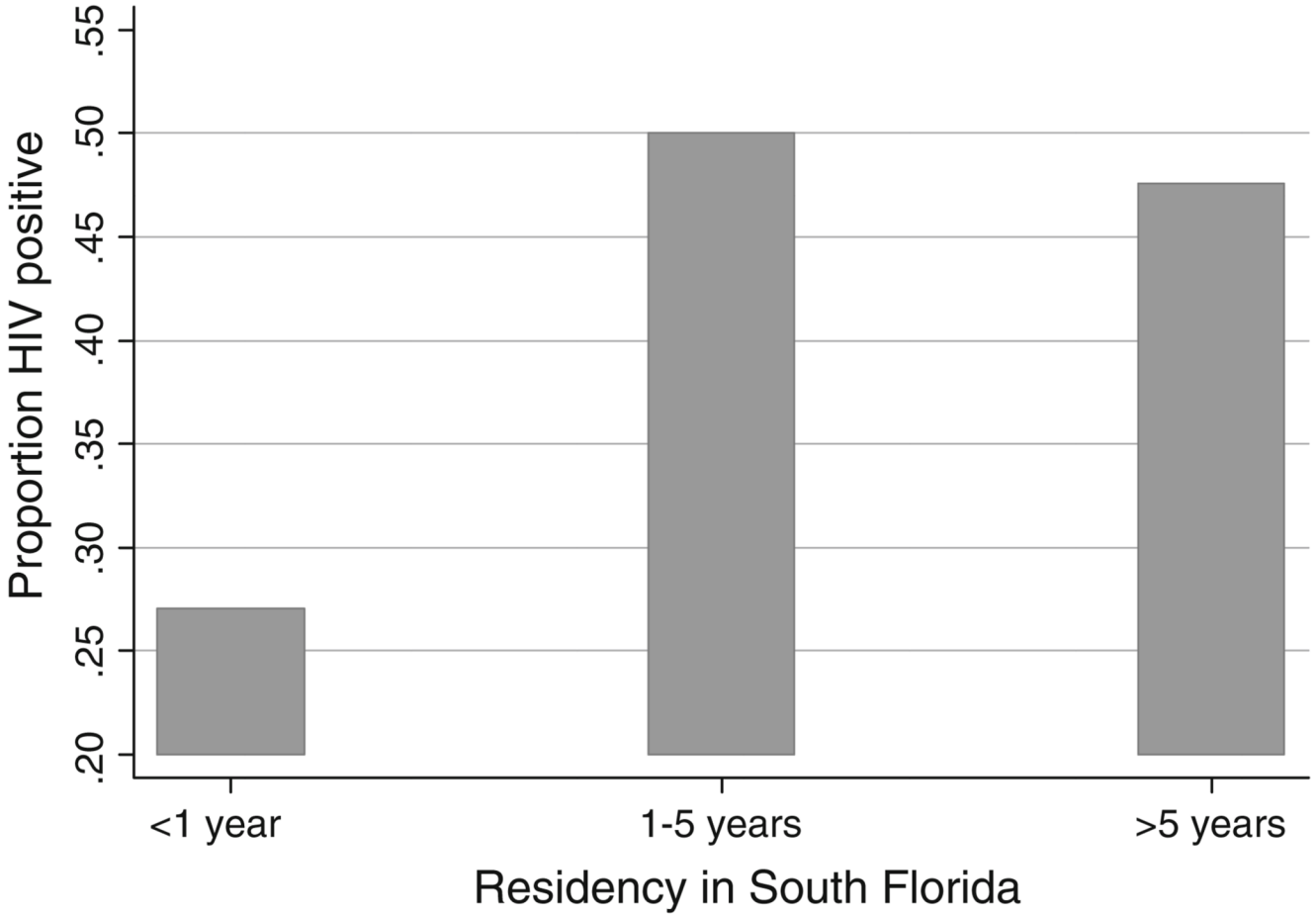
Fig. 2.
Amount of friends who use drugs in relation to time of residency in South Florida



Unpaired two sample 2-tailed t-test results:

H0: 1=2;	m1=13.2 (SD 16.4); m2=32.5 (SD 41.4); t=-2.69, *p*=.009
H0: 1=3;	m1=13.2 (SD 16.4); m3=21.2 (SD 34.1); t=-1.40, *p*=.16
H0: 2=3;	m2=32.5 (SD 41.4); m3=21.2 (SD 34.1); t=2.13, *p*=.03
H0: 1=(2&3)	m1=13.2 (SD 16.4); m23=23.4 (SD 35.8); t=-1.71, *p*=.09

Fig. 3.
Mean number of acts of unprotected anal sex in past 90 days in relation to time of residency in South Florida



Unpaired two sample 2-tailed t-test results:

H0: 1=2;	m1=.27 (SD .45); m2=.50 (SD .50); t=-2.23, p=0.03
H0: 1=3;	m1=.27(SD .45); m3=.48 (SD .50); t=-2.35, p=0.02
H0: 2=3;	m2=.50 (SD .50); m3=.48 (SD .50); t=.31, p=0.75
H0: 1= (2&3)	m1=.27 (SD .45); m23=.48 (SD .50); t=-2.43, p=.02

Fig. 4.
HIV prevalence in relation to time of residency in South Florida

Table 1

Characteristics of substance using MSM in South Florida (*N* = 325)

Age (mean, SD; range:18–55)		**39 (9.9)**
Education years (mean, SD)		**14 (2.3)**
Income (median)		**$25,000**
	N	**%**
Race/ethnicity		
White non-Latino	167	51.4
Latino	88	27.1
Black	55	16.9
Other race/ethnicity	15	4.6
Sexual identity		
Gay	271	83.4
Bisexual/other	32	16.6
Health/social risk indices		
HIV-positive	147	45.2
Ever arrested	200	61.5
Ever mental health diagnosis	186	57.2
Ever drug abuse treatment	147	45.2
Current DSM-IV dependence	204	62.8
Victimization history		
Attacked w/weapon	155	52.3
Physical abuse	153	47.1
Sexual abuse	106	32.6
Emotional abuse	236	72.6
Abused before age 18	176	54.2
Substance use (past 90 days)		
Heavy alcohol	262	80.6
Amyl nitrites	184	56.6
Cocaine/crack	146	44.9
Rx sedatives (non-prescribed)	108	33.2
Methamphetamine	87	26.8
Rx opioids (non-prescribed)	77	23.7
Ecstasy	54	16.6
GHB	48	14.8
Sexual behaviors (past 90 days)		
# male anal sex partners (mean, SD)	14 (17.9)	
# anal sex times (mean, SD)	32 (38.6)	
# anal sex times no condom (mean, SD)	22 (34.3)	

Table 2

Demographic characteristics, social support factors, venues for meeting sexual partners, and residential distance from sexual partners among African American MSM in Baltimore, the Unity in Diversity study (*N* = 188)

	Total (*n* = 188)
	***N* (%)**
At least college, associate or technical degree	79 (42.0)
Working full/part time	52 (27.7)
Income >10,000	87 (46.3)
HIV-positive	93 (49.5)
Lifetime incarceration	131 (79.68)
	Mean (SD)
Age	38.2 (10.39)
Total networks size	8.72 (4.34)
Age of network members	39.6 (8.37)
Number of network members advise or talk to	1.94 (1.64)
Number of network members pitch into help	1.31 (1.47)
Number of network members loan money/valuables	1.28 (1.43)
Number of network members entrust w/money	0.77 (0.89)
Number of network members providing health advice	0.98 (1.01)
Number of network members give support to	0.51 (0.88)
Number of sex partners	3.28 (1.79)
Number of male sex partners	2.62 (1.79)
Number of female sex partners	0.53 (0.99)
Number of male partners who loaned money	0.26 (0.53)
Number of female partners who loaned money	0.08 (0.27)
Number of male partners hang out with	0.61 (0.80)
Number of female partners hang out with	0.12 (0.36)
Number of male partners see at least weekly	1.12 (1.17)
Number of female partners see at least weekly	0.31 (0.60)
Number of HIV-positive partners	1.23 (1.95)
Mean dependence on partners	1.67 (1.00)
% of network members HIV-positive (SD)	0.16 (0.22)
Network density	0.40 (0.28)
Number of partners met through friends	0.57 (0.99)
Number of partners met on Internet	0.46 (1.07)
Number of partners met at a bar	0.54 (0.99)
Number of partners met in support/social group	0.10 (0.51)
Number of partners met at a party	0.13 (0.42)
Number of partners met on chat line	0.16 (0.63)
	N (%)

	Total (*n* = 188)
	***N* (%)**
Partners met through friends	68 (36.17)
Partners met at a bar	57 (30.32)
Partners met on Internet	41 (21.81)
Partners met in support/social group	10 (5.32)
Partners met at a party	20 (10.64)
Partners met on chat line	16 (8.51)
Residential distance from sexual partners	
All sex partners living outside the neighborhood	110 (58.51)
Having sex partners living in the same neighborhood but not same household	39 (20.74)
Having sex partners living in the same household	39 (20.74)

Table 3

Relationship between egocentric network social support and risk factors and residential distance among sexual partners, the Unity in Diversity study (N = 188)

	Does not have sex partner living in the same household (n = 149) N (%)	**Has sex partner living in the same household (n = 39) N (%)**	**Chi-square or F-statistics**	***P***
At least college, associate or technical degree	61 (40.9)	18 (46.2)	0.34	0.56
Working full/part time	41 (27.5)	11 (28.2)	0.007	0.93
Income >10,000	69 (46.3)	18 (46.2)	0.003	0.99
HIV-positive	68 (45.6)	25 (64.1)	4.22	0.04
Lifetime incarceration	101 (67.8)	30 (76.9)	1.22	0.27
	Mean (SD)	Mean (SD)		
Age	37.6 (10.7)	40.5 (8.58)	2.45	0.12
Total networks size	8.86 (4.04)	8.21 (5.40)	0.70	0.40
Age of network members	*39.0 (8.51)*	*42.0 (7.46)*	*4.01*	*0.05*
Number of network members advise or talk to	1.89 (1.62)	2.08 (1.74)	0.36	0.55
Number of network members pitch in to help	*1.21 (0.99)*	*1.69 (1.47)*	*5.76*	*0.02*
Number of network members loan money/valuables	1.23 (0.98)	1.43 (1.43)	1.75	0.19
Number of network members entrust w/money	*0.68 (0.83)*	*1.10 (1.05)*	*6.99*	*0.01*
Number of network members providing health advice	0.94 (0.90)	1.13 (1.34)	1.08	0.30
Number of network members give support to	0.46 (0.90)	0.69 (0.80)	2.11	0.15
Number of sex partners	3.28 (1.80)	3.28 (1.79)	0.01	0.99
Number of male sex partners	2.58 (1.81)	2.74 (1.71)	0.25	0.62
Number of female sex partners	0.55 (1.04)	0.46 (0.79)	0.25	0.62
Number of male partners who loaned money	*0.18 (0.47)*	*0.54 (0.64)*	*15.35*	*<.001*
Number of female partners who loaned money	*0.05 (0.21)*	*0.21 (0.41)*	*11.04*	*0.001*
Number of male partners hang out with	*0.53 (0.77)*	*0.92 (0.87)*	*7.66*	*0.006*
Number of female partners hang out with	0.11 (0.35)	0.15 (0.37)	0.53	0.47
Number of male partners see at least weekly	*1.01 (1.16)*	*1.54 (1.14)*	*6.54*	*0.01*
Number of female partners see at least weekly	0.31 (0.62)	0.31 (0.52)	0.01	0.99
Number of HIV-positive partners	*0.53 (1.08*	*1.00 (1.07*	*5.84*	*0.02*
Financial dependence on partners (scale 1—not dependent to 5—very dependent)	*1.56 (0.98)*	*2.07 (0.99)*	*8.35*	*0.004*
Average % of networks HIV-positive	*0.13 (0.21)*	*0.25 (0.26)*	*8.90*	*0.003*
Network density	*0.38 (0.25)*	*0.47 (0.28)*	*3.85*	*0.05*